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Scaled-Up Production Of Next-Generation Carbohydrate-Derived Building Blocks To Enhance The Competitiveness Of A Sustainable European Chemicals Industry

On July 1-2, 2024, the Circular Bio-based Europe Joint Undertaking (CBE-JU) BIONEER consortium gathered in Trondheim, Norway, for the project's kick-off meeting.



The CBE JU innovation project BIONEER started officially on June 1st, 2024, and will during its 48 months project period demonstrate and advance the potential of a number of different lignocellulosic biomass carbohydrate-derived components to replace fossil-based functional building blocks in the furniture coatings and personal care sectors and establish their route to market by showcasing their application potential.

The focus of BIONEER is on the utilization of low-cost, sustainably sourced, lignocellulosic biomass as feedstock to produce novel platform chemicals for difficult to decarbonize industrial sectors, such as liquid plastics used in personal care and coatings. The project thereby moves beyond first-generation carbohydrate-derived chemicals, leveraging the biotechnology, biochemistry, chemistry, and process expertise of the consortium to scale-up the production of a range of novel monomeric and polymeric building blocks that



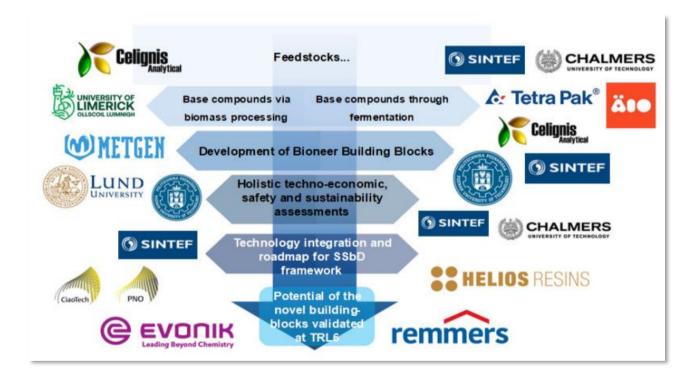




allow for important additional functionalities to be conferred to biobased chemicals. In particular, BIONEER builds on and exploits the exceptional results of the RIA projects EnXylaScope (Grant Agreement N° 101000831) and PERFECOAT (Grant Agreement N° 101022370), still ongoing at BIONEER project start. The consortium sees BIONEER as the timely next step to rapidly lifting key results from these projects to the next level of industrial demonstration in the frame of our overall commercially-focused exploitation strategy that will ultimately culminate in widespread deployment of the biobased innovations in the targeted massmarkets.

BIONEER Building Blocks (BBB) made from sustainably sourced biomass using biotech and chemo-catalytic approaches will replace toxic and non-environmentally friendly fossil-based building blocks. The targeted fossil-based building blocks to be replaced are bisphenol A and its derivatives (for the UV-curable coatings market), as well as alkyl acrylates, vinyl pyrrolidine, vinyl acetate, and siloxanes (for the personal care market). Process residues will be considered for packaging applications.

The BIONEER project answers the call topic HORIZON-JU-CBE-2023-IA-06: 'Selective, sustainable production routes towards bio-based alternatives to fossil-based chemical building blocks' and has received funding from the Circular Bio-based Europe Joint Undertaking, under the European Union's Horizon Europe research and innovation programme under grant agreement N° 101157779.



BIONEER project activities are coordinated by SINTEF, Norway.

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For further information about BIONEER, please see www.bioneer-project.eu and follow us on LinkedIn.







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